

What Is Claimed Is:

1. A system for manufacturing scheduling, comprising:

an I/O device for receiving a list of component tools in
a pre-defined tool group, which comprises at least
one tool for processing an object, wherein the list
contains records of component tools in the tool
group;

a processor for calculating the number of tool groups to
which each tool belongs, assigning a preference index
to each tool accordingly, and generating a
preference-based manufacturing schedule of the tool
accordingly; and

a storage device for storing the list of component tools
in the tool group, the tool group count and preference
index of each tool, and the manufacturing schedule.

2. The system as claimed in claim 1, wherein the
processor further generates a group mapping table which contains
records of the component tools in each tool group.

3. The system as claimed in claim 1, wherein the processor further generates a tool mapping table which contains tool group count for each tool.

4. The system as claimed in claim 1, wherein the 5 processor assigns a smaller preference index to the tool with a lower tool group count.

5. The system as claimed in claim 1, wherein the processor selects the tool having the lowest preference index within the group for fabricating the object.

10 6. The system as claimed in claim 1, wherein the tool is a semiconductor processing tool.

7. The system as claimed in claim 6, wherein the semiconductor processing tool is a circuit-probing tool.

8. A method of manufacturing, comprising:
15 providing a plurality of tool groups, wherein each tool group has at least one tool for processing an object;

Client's ref.: TSMC2003-1000

File: 0503-A30091US/final/alicewu/

calculating the tool group count of each tool, wherein the
tool group count is the number of tool groups to which
the tool belongs;

assigning a preference index to each tool according to the
5
tool group count;

selecting one of the component tools from the tool group
according to the assigned preference index of each
tool; and

processing the object using the selected tool.

10 9. The method as claimed in claim 8, wherein the tool
group count calculating step further comprises generating a
group mapping table which contains records of the component
tools within the tool group.

10. The method as claimed in claim 8, wherein the
15 preference determining step further comprises generating a tool
mapping table which contains the tool group count for each tool.

11. The method as claimed in claim 8, wherein the preference determining step further comprises assigning a lower preference index to the tool with a lower tool group count.

12. The method as claimed in claim 11, wherein the 5 manufacturing schedule determining step further comprises selecting the tool having the lowest preference index within the tool group for processing the object.

13. The method as claimed in claim 8, wherein the tool is a semiconductor processing tool.

10 14. The method as claimed in claim 13, wherein the semiconductor processing tool is a circuit-probing tool.

15. A computer readable storage medium for storing a computer program providing a method of manufacturing scheduling, the method comprising:

15 receiving a plurality of tool groups, wherein each tool group has at least one tool for processing an object;

Client's ref.: TSMC2003-1000

File: 0503-A30091US/final/alicewu/

calculating the tool group count of each tool, wherein the

tool group count is the number of tool groups to which

the tool belongs;

assigning a preference index to each tool according to the

5 tool group count;

selecting one of the component tools from the tool group

according to the assigned preference index of each

tool;

generating a manufacturing schedule for processing the

10 object according to the assigned preference index of

each tool.

16. The storage medium as claimed in claim 15, wherein the

tool group calculating step further comprises generating a group

mapping table which contains records of the component tools

15 within the tool group.

17. The storage medium as claimed in claim 15, wherein the

preference determining step further comprises generating a tool

mapping table which contains the tool group count for each tool.

18. The storage medium as claimed in claim 15, wherein the preference determining step includes assigning a lower preference index to the tool with a lower tool group count.

19. The storage medium as claimed in claim 18, wherein the 5 tool selection step includes selecting the tool having the lowest preference index within the tool group for processing the object.

20. The storage medium as claimed in claim 15, wherein the tool is a semiconductor processing tool.

10 21. The storage medium as claimed in claim 20, wherein the semiconductor processing tool is a circuit-probing tool.